



U.S. Department
of Transportation

400 Seventh Street, S.W.
Washington, D.C. 20590

Research and
Special Programs
Administration

MAR 31 2004

DOT-E 12955
(FOURTH REVISION)

EXPIRATION DATE: November 30, 2005

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Air Cruisers Company
Belmar, New Jersey

(See Appendix A to this exemption for a list of additional grantees)

2. PURPOSE AND LIMITATION:

a. This exemption authorizes the transportation in commerce of a non-DOT specification fiber reinforced plastic (FRP), full composite (FC), compressed gas cylinder which are used as components in aircraft. This exemption provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.

b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.219(b)(1) in that life-saving appliances containing cylinders that do not comply with HMR are not authorized except as specified herein; §§ 172.203(a) and 172.301(c) in that the exemption number need not be noted on shipping papers or be marked on packages of Life-saving appliances, self-inflating, UN2990, and §§ 173.302(a) and 175.3 in that a non-DOT specification

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cylinder containing a compressed gas is not authorized except as specified herein.

5. BASIS: This exemption is based on the application of Air Cruisers Company dated February 6, 2004, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Compressed gas, n.o.s.	2.2	UN1956	N/A
Life-saving appliances, self inflating	9	UN2990	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packagings prescribed is a non-DOT specification fiber reinforced plastic (FRP), full composite (FC), compressed gas cylinder manufactured by Structural Composites Industries. The cylinders authorized under this exemption are identified in a design approval issued by the Federal Aviation Administration, New York Aircraft Certification Office on February 14, 2002 (see attachment 1).

b. TESTING - Each cylinder must be reinspected and hydrostatically retested at least once every three years in accordance with § 180.209(a) as prescribed for DOT 3HT cylinders, except that the rejection elastic expansion criterion does not apply, and permanent volumetric expansion must not exceed 5 percent of total volumetric expansion at test pressure. Retest dates must be steel stamped on the outer exposed metallic surface of the cylinder neck, or marked on a label securely affixed to the cylinder and overcoated with epoxy. Reheat treatment or repair of rejected cylinders is not authorized.

- c. OPERATIONAL CONTROLS -

(1) This exemption covers only cylinders currently installed as part of an aircraft safety systems as identified in TABLE 1 to attachment 1, or in the

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possession of operators or end-users of the Slide or Slide/Raft Evacuation Systems.

(2) The cylinders covered by this exemption must have been manufactured prior to February 1, 2002.

(3) Cylinder must be shipped as an integral part of the life-savings appliance or be packaged in accordance with § 173.301(a)(9).

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modification or change is made to the package or its contents and it is reoffered for transportation in conformance with this exemption and the HMR.

b. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

c. At the first scheduled maintenance of the cylinder after receipt of the applicable Service Bulletin and marking materials from the exemption holder (Air Cruisers Company), but not later than November 1, 2002, each cylinder must be marked as follows (Labels preprinted on or before November 1, 2003 that reference 49 CFR 173.34(e)(6)(ii) and (iii) need not be replaced):

(1) **FAA APPROVED**
LETTER DATED FEBRUARY 14, 2002
TRANSPORT IN ACCORDANCE DOT-E 12955
AFTER FIFTEEN YEARS FROM DATE OF MFG.
CONDEMN IN ACCORDANCE WITH
49 CFR 180.205(i)(1)

(2) The marking "DOT-E 8162-3000", which was in place on the cylinder at the time of manufacture, must be covered completely.

d. Until remarked as required by paragraph 8.c., the following packages may be offered for transportation and transported:

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(1) Self inflating life-saving appliances (aircraft emergency escape slide assemblies) that conform to § 173.219 except that the nonflammable compressed gas is packaged in DOT-E 8162 exemption cylinders that do not meet the requirements of the HMR; or

(2) Non-DOT specification cylinders, containing compressed gas n.o.s. listed in paragraph 6, marked DOT-E 8162, that do not meet the E-8162 exemption. Each cylinder must be packaged in accordance with § 173.301(a)(9).

e. Each cylinder specified in this exemption has been manufactured under DOT-E 8162 and has a marked service pressure of 3000 psig except that each cylinder has been charged up to 10 percent in excess of its marked service pressure.

f. No cylinder may be charged to more than 10% over the marked service pressure.

g. No cylinder is authorized 15 years after the date of manufacture marked on the cylinder.

h. Cylinders subjected to action of fire may not be used under the terms of this exemption.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, cargo aircraft only, and passenger-carrying aircraft.

10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel or aircraft used to transport packages covered by this exemption. The shipper must furnish a current copy of this exemption to the air carrier before or at the time the shipment is tendered. A copy of the exemption need not be provided to the carrier or carried aboard the vessel or aircraft for materials offered for transportation or transported as Life-saving appliances, self-inflating, UN2990.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

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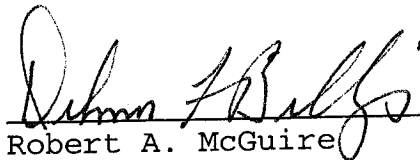
- o Persons operating under the terms of this exemption must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when this exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incident involving the package and shipments made under the terms of this exemption.

Issued in Washington, D.C.:



for Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

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(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.
Attention: DHM-31.

Copies of this exemption may be obtained by accessing the Hazardous Materials Safety Homepage at <http://hazmat.dot.gov/exemptions> Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

PO: CHHochman/dl

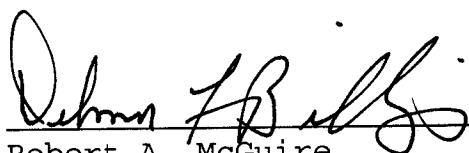
APR 21 2004

The following are hereby granted party status to this exemption based on their application(s) submitted in accordance with § 107.107 or § 107.109, as appropriate:

Company Name City/State	Applicati on Date	Issue Date	Expiration Date
American Airlines, Inc. Tulsa, OK	Dec 3, 2003	APR 21 2004	Nov 30, 2005
Austrian Airlines, Vienna Austria (US Agent: Air Cruisers Co., Wall, NJ)	Mar 31, 2004	Mar 31, 2004	Nov 30, 2005
Aerazur, SA Paris, France (US Agent: Air Cruisers Co., Wall, NJ)	Mar 31, 2004	Mar 31, 2004	Nov 30, 2005
Air New Zealand Limited Melbourne, Australia (US Agent: Air Cruisers Co., Wall NJ)	Mar 31, 2004	Mar 31, 2004	Nov 30, 2005
Ansett Australia Tullamarine Victoria, Australia (US Agent: Air Cruisers Co., Wall, NJ)	Mar 31, 2004	Mar 31, 2004	Nov 30, 2005
Persons listed on Air Cruisers Company's March 31, 2004 letter on file with OHMEA	Feb 6, 2004	Mar 31, 2004	Nov 30, 2005
Delta Air Lines, Inc. Atlanta, GA	Dec 03, 2003	Dec 10, 2003	Nov 30, 2005
Northwest Airlines, Inc. Minneapolis, MN	Mar 23, 2004	Mar 31, 2004	Nov 30, 2005
Thornton Technology Corporation San Marcos, CA	Apr 5, 2004	APR 21 2004	Nov 30, 2005

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Company Name City/State	Applicati on Date	Issue Date	Expiration Date
United Parcel Service Company	Dec 15, 2003	Mar 31, 2004	Nov 30, 2005



APR 21 2004

Date

Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety



U.S. Department
of Transportation
**Federal Aviation
Administration**

New York Aircraft Certification Office

10 Fifth Street, 3rd Floor
Valley Stream, NY 11581

JUL 12 2002

FEB 14 2002

Mr. John O'Donnell
Air Cruisers Company
P.O. Box 180
Highway 34 South & Allaire Airport
Belmar, New Jersey 07719-0180

Dear Mr. O'Donnell:

DOT-E 8162-3000 Pneumatic Cylinder Design Approval

The FAA has completed its investigation and review of data submitted by Air Cruisers Company (ACC) for over-pressurized Kevlar-composite pneumatic cylinders, DOT-E 8162-3000.

Based on the FAA's evaluation of ACC's test results and analyses for the over-pressurized Kevlar-composite pneumatic cylinders, it was determined that over-pressurizing these DOT-E 8162-3000 to 360 psig above the design pressure will not compromise the strength and useful life of such pneumatic cylinders.

In summary, it is the position of this office that these non-compliant DOT-E 8162-3000 pneumatic cylinders are acceptable for aeronautical use for the remainder of their 15 years service life.

This design approval is limited to Kevlar-composite pneumatic cylinders, DOT-E 8162-3000, manufactured prior to February 1, 2002, and currently installed on aircraft as listed in TABLE 1, or in the possession of operators or end-users of the Slide or Slide/Raft Evacuation Systems. The non-compliant DOT-E 8162-3000 pneumatic cylinders must be replaced at the expiration of the 15-year service life with cylinders that are qualified for a higher service pressure and meet all the DOT requirements.

If you have any questions or comments regarding our position, please contact this office: Mr. Leung Lee, Aerospace Engineer, at (516) 256-7509.

Sincerely,

Vito A. Pulera
Manager, New York Aircraft Certification Office

Enclosure

JUL 12 2002

Inflation CMM	Program	End Item P/N	Evacuation System CMM or P/N	Pneumatic Cylinder (Reservoir) & Valve Assy P/N	Pneumatic Cylinder (Reservoir) P/N	Actual Pressure
25-65-02	A300/A310 S/R	D30545-Series	25-61-17	D17925-101	D17851-27	3160
		D30546-Series	25-61-17	D17925-103	D17851-3	3360
26-65-03	A300/A310 Slide	D31020-Series	25-60-40	D17925-105	D17851-27	3150
	A300 Slide	D31023-Series	25-60-40	D17925-109	D17851-3	3140
	A300 Slide Dr. 3	D31021-Series	25-60-42	D17925-107, -111	D17851-31	3200
25-65-04	A310 O/W Slide	D31022-101, -102	25-60-41	D17926-101, -102	D17851-28	3175
25-65-07	BO105, BK-117 Floats	D24911-101 D34065-101	25-60-97	D17902-101	D17908-1	3180
25-65-09	737 Slide	D31365-()	25-60-43	D17978-121	D17977-3	3180
		D31355-427 & Subs	25-60-55	D17978-101, -103, -109, -111	D17977-1	3180
25-65-10	757 S/R & Slide	D30657, 61475, D31040, D31038 all Series	25-61-26, 25-61-29, 25-66-05, 25-66-01	D17906-111	D17851-15	3050
		D31039, D31042, D30658, D30859, 61570 all Series	25-66-02, 25-66-04, 25-61-27, 25-61-28, 25-61-30	D17906-113	D17851-27	3030
		D31041, 64183 Series	25-66-03, 25-66-19	D17908-116, -121	D17851-25	3090
25-65-12	737 Slide	D31591-Series	25-60-47, 25-60-59	D37022-101, -103, -105	D17851-31	3040
			25-60-99	D37022-105	D17851-31	3040
25-65-17	A320/A321 Slides, S/R, O/W	D31516, D31517-Series	25-60-56	D18309-101	D17851-34	3250
		D30664-Series	25-61-20	D18309-103	D17851-27	3060
		D30665-Series		D18309-105	D17851-35	3150
		D31865-101 thru-112	25-60-58	D37080-101, 60652-101, -103	D17851-31	3080, 3275 3140

TABLE 1
KEYLAR - COMPOSITE PNEUMATIC CYLINDERS (RESERVOIRS) DOT-E 6162-3000

JUL 12 2002

Inflation CMM	Program	End Item P/N	Evacuation System CMM or P/N	Pneumatic Cylinder (Reservoir) & Valve Assy P/N	Pneumatic Cylinder (Reservoir) P/N	Actual Pressure
25-65-18	MD-11 S/R	60289-Series	25-61-21	60651-101,-113	D17851-27	3250
		60290-Series	25-61-22	60651-103,-115	D17851-15	3250
25-65-19	767 Slide	60291-Series*	25-61-23*	60651-105,-117*	D17851-9*	3250
25-65-20	737-300/400/500 Slide	60176-Series	25-60-60	60740-101,-102,-105	60738-1	3050
		61620-488	25-66-06	61767-101	D17851-31	3040
25-65-21	A321 Slides	61620-481	25-66-13	61767-103	D17851-31	3150
		62289-Series	25-66-10, 25-66-11	61639-103	D17851-31	3060
25-65-29	757-200/300 S/R	63936-330	25-61-36	63836-101	D17851-3	3040
25-65-14	BK-117 Float Systems	D34156-101	25-63-04	D97012-101,-103	D37044-1	3320
25-63-01	A109 Float Systems	D34099-101 thru -104	25-63-01	D17986-103	D17979-1	3070

*Systems with a DOT-E-8162-3500 cylinders are not effected.

CMM: COMPONENT MAINTENANCE MANUAL

TABLE 1
KEVLAR - COMPOSITE PNEUMATIC CYLINDERS (RESERVOIRS) DOT-E 8162-3000